

PATENT ABSTRACTS OF JAPAN

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(54) HIGH PERMEABILITY MATERIAL

(57)Abstract:

PURPOSE: To acquire a high permeability material of a large saturated flux density and a small deterioration at a high frequency region by using a magnetic material of a large electric resistivity where polymer is deposited between ferromagnetic metal particles.

CONSTITUTION: A polymer is deposited between ferromagnetic metal particles, saturated magnetization is made not less than 800G, and a resistivity is made $180\mu\Omega\text{-cm}$ or more.

Simultaneous vapor deposition of ferromagnetic metal and polymer realizes deposition of polymer between ferromagnetic metal particles and a soft magnetic film of a large electric resistance. Simultaneous vacuum deposition makes it easy for the ferromagnetic metal to realize a column structure and a polymer deposits between the columns. Since a polymer of an insulator deposits between the columns, an electric resistance

increases in comparison with a simple substance of an original ferromagnetic metal.

Thereby, an eddy current loss reduces, deterioration of permeability in a high frequency region is restrained, and a saturated flux density increases.

